

### **REMARKS**

In the Office Action, claims 1-3, 5-7, 11-13, 15-21, 23, 24, and 26 were rejected and claims 4 and 14 were objected to as depending upon a rejected base claim. No claims are presently added, amended, or canceled. Accordingly, claims 1-26 are pending in the present application. In view of the following remarks, Applicant respectfully requests reconsideration and allowance of all pending claims.

### **Allowable Subject Matter**

In the Office Action, the Examiner indicated that claims 8-10, 22, and 25 are allowable and further indicated that claims 4 and 14 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Applicant would like to thank the Examiner for noting the allowable subject matter.

### **Rejections under 35 U.S.C. §102**

The Examiner rejected claims 1, 6, 21, and 24 under 35 U.S.C. §102 (e) as being anticipated by Wilensky et al. (U.S. Patent No. 7,171,057, hereinafter “the Wilensky reference”).

### ***Legal Precedent***

Anticipation under 35 U.S.C. §102 can be found only if a single reference shows exactly what is claimed. *See Titanium Metals Corp. v. Banner*, 227 U.S.P.Q. 773 (Fed. Cir.1985). For a prior art reference to anticipate under 35 U.S.C. § 102, every element of the claimed invention must be identically shown in a single reference. *See In re Bond*, 15 U.S.P.Q.2d 1566 (Fed. Cir.1990). That is, the prior art reference must show the *identical invention “in as complete detail as contained in the . . . claim”* to support a *prima facie* case of anticipation. *Richardson v. Suzuki Motor Co.*, 9 U.S.P.Q. 2d 1913, 1920 (Fed. Cir. 1989) (emphasis added). Thus, for anticipation, the cited reference must not only disclose all of the recited features but must also disclose the *part-to-part relationships*

between these features. *See Lindermann Maschinenfabrik GMBH v. American Hoist & Derrick*, 221 U.S.P.Q. 481, 486 (Fed. Cir.1984). Accordingly, the Applicant need only point to a single element or claimed relationship not found in the cited reference to demonstrate that the cited reference fails to anticipate the claimed subject matter.

***Independent Claims 1, 21, and 24***

Independent claims 1, 21, and 24 recite, *inter alia*, “characterizing spike noise. . . and performing spike noise dependent blending of data derived from the input image data with the processed image data based upon [a] characterization.” Applicant respectfully asserts that the Wilensky reference fails to disclose each element of independent claims 1, 21, and 24.

As a preliminary matter, Applicant notes that in a previous Office Action, the Examiner relied on the Wilensky reference to disclose spike noise dependent blending when rejecting claims 1, 21, and 24 under 35 U.S.C. Section 103(a). Office Action dated April 24, 2008, pp. 12-14. In response, Applicant asserted that the Wilensky reference failed to disclose spike noise dependent blending, asserted that the Fritz reference failed to disclose characterizing spike noise, and asserted improper combination of the Fritz and the Wilensky references. Response dated June 24, 2008, pp. 11-18. The Examiner then issued a new Office Action (dated August 14, 2008) indicating that Applicant’s arguments were persuasive, and issuing new grounds of rejection, rejecting claims 1, 21, and 24 under 35 U.S.C. Section 103(a) as being unpatentable over the Fritz reference in view of two other references. Office Action dated August 14, 2008, p. 2.

First, Applicant would like to point out that the original citation of the Wilensky reference only in combination with other references under Section 103(a) appears to imply that the Examiner did not believe that the Wilensky reference disclosed all of the elements recited in the independent claims. Furthermore, as it is unclear as to which of Applicant’s arguments the Examiner previously found persuasive, Applicant respectfully

resubmits that the Wilensky reference fails to disclose each element of independent claims 1, 21, and 24.

For instance, Applicant asserts that the Wilensky reference fails to teach or suggest characterizing spike noise, as recited by independent claims 1, 21, and 24. As previously stated by Applicant, the Wilensky reference appears to disclose techniques for improving non-local noise characteristics. Wilensky, col. 6, lines 38-40 and 56. The Wilensky reference specifically defines noise as “a non-local property of an image.” Wilensky, col. 6, line 56.

In contrast, the claims of the present Application are directed to “spike noise,” which is local in nature. Although the claims must be interpreted as broadly as their terms reasonably allow, the words of the claim must be given their plain meaning unless the plain meaning is inconsistent with the specification. *See In re Am. Acad. of Sci. Tech. Ctr.*, 70 U.S.P.Q.2d 1827, 1834 (Fed. Cir. 2004); *In re Zletz*, 13 U.S.P.Q.2d 1320, 1322 (Fed. Cir. 1989). Specifically, the plain meaning of the word “spike” connotes a property that is local in nature. For example, the term “spike” is defined as “a pointed element in a graph or tracing,” “an unusually high and sharply defined maximum,” “a momentary sharp increase and fall in electric potential,” and “an abrupt sharp increase.” *Merriam Webster’s Collegiate Dictionary* 1201 (11<sup>th</sup> ed. 2005). These definitions all define the term “spike” as a sharp increase, maximum, or point. Indeed, the plain definition of the term spike appears to directly conflict with interpreting a spike as anything other than a local phenomenon.

Further, Applicant stresses that interpreting spike noise as a local phenomenon is consistent with the specification. Although limitations from the specification are not read into the claims, claims must be given an interpretation that is reasonable and consistent with the specification. *See in re Prater*, 415 f.2d 1393, 1404-05, 162, U.S.P.Q. 541, 550-51 (C.C.P.A. 1969) (emphasis added). The specification clearly differentiates spike noise

from non-local noise. For example, the specification states, “typical image noise may be a mixture of random point noise, which may also be referred to as spike noise, and patterned noise.” Specification, p. 2, lines 9-11 (emphasis added). The specification also explains that spike noise is point noise, stating in the background section that “imaging methods requiring reconstruction . . . convert point or spike noise into splotches or small streaks and thereafter the point noise is usually hidden in the patterned noise.”

Specification, p. 2, lines 13-15. Indeed, the specification is directed to reducing spike noise in addition to patterned noise. For example, the specification explains, “Methods designed to mitigate patterned noise do not adequately mitigate point noise, however, without blurring or decreasing the contrast of the useful information in the processed image. There is a need therefore, for an improved technique for reducing both random noise points (spike noise) and patterned noise in the same image.” Specification, p. 2, lines 20-26. Indeed, the specification specifically states that “spike noise points in an image are inconsistent with their neighbors.” *Id.* p. 9, lines 22-23. In other words, as described in the present specification, spike noise is local in nature. In view of the specification and the plain meaning of the term “spike,” Applicant submits that the reduction of non-local noise, as disclosed by Wilensky, fails to teach or suggest characterizing spike noise and performing spike noise dependent blending as recited by independent claims 1, 21, and 24.

Second, Applicant reasserts that the Wilensky reference fails to teach or suggest blending “input image data with processed image data,” as recited in claims 1, 21, and 24. Per the claim language, the processed image data is produced by “processing input image data.” Thus, the claims recite the blending of data derived from the input image data with processed data produced from the input image data. In short, the data that is blended is derived from / produced from the same input image data.

In contrast, as previously stated by Applicant, the Wilensky reference discloses blending data from two separate image regions to form a blended image region. Wilensky, col. 5, line 65 to col. 6, line 1; col. 1, lines 7-9; Fig.2. Specifically, step 110, shown in Figure 1 of the Wilensky reference, states, “blend first and second image components corresponding to first and second image regions respectively.” Wilensky, Fig. 1. Thus, it appears that step 110 recognizes that the blended components originate from different image regions. Applicant would like to point out that different portions of an image are not based on the same underlying image data. Indeed, each image portion is based on its own set of data. In other words, blending two separate regions (or portions) of an image together involves blending data based on two different sets of underlying data. In summary, the Wilensky reference appears to teach blending data from two different regions, which necessarily includes blending different input image data. The Examiner has not pointed to any process taught by Wilensky that could reasonably be correlated to blending data based on the same image data.

In view of the arguments set forth above, Applicants respectfully assert that independent claims 1, 21, and 24 are not anticipated by the cited reference. Further, based on their dependence from claim 1, claims 2-10 also are believed to be allowable. Accordingly, Applicants request withdrawal of the Examiner’s rejection under 35 U.S.C. §102.

### **Rejections under 35 U.S.C. §103**

The Examiner rejected claims 2 and 5 under 35 U.S.C. §103(a) as being unpatentable over the Wilensky reference in view of Avinash (U.S. Patent No. 6,208,763, hereinafter “the Avinash reference”); rejected claim 3 under 35 U.S.C. §103(a) as being unpatentable over the Wilensky and Avinash references, as applied to claim 2 above, and further in view of Metcalfe et al. (U.S. Patent No. 6,094,511, hereinafter “the Metcalfe reference”); rejected claim 7 under 35 U.S.C. §103(a) as being unpatentable over the Wilensky reference in view of Janko et al. (U.S. Patent No. 6,690,840, hereinafter “the

Janko reference”); rejected claims 11, 18-20, 23, and 26 under 35 U.S.C. §103(a) as being unpatentable over Kasahara et al. (U.S. Publication No. 2002/0005857, hereinafter “the Kasahara reference”) in view of Cooper (U.S. Patent No. 7,215,365, hereinafter “the Cooper reference”); rejected claims 12 and 15 under 35 U.S.C. §103(a) as being unpatentable over the Kasahara, and Cooper references as applied to claim 11 above, and further in view of the Avinash reference; rejected claim 13 under 35 U.S.C. §103(a) as being unpatentable over the Kasahara, Cooper, and Avinash references as applied to claim 12 above, in view of the Metcalfe reference; rejected claims 16 under 35 U.S.C. §103(a) as being unpatentable over the Kasahara, and Cooper references as applied to claim 11 above, and further in view of the Wilensky reference; rejected claim 17 under 35 U.S.C. §103(a) as being unpatentable over the Kasahara, and Cooper references as applied to claim 11 above, and further in view of the Janko reference. The Applicant respectfully traverses these rejections.

### ***Legal Precedent***

The burden of establishing a *prima facie* case of obviousness falls on the Examiner. *Ex parte Wolters and Kuypers*, 214 U.S.P.Q. 735 (PTO Bd. App. 1979). To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 180 U.S.P.Q. 580 (C.C.P.A. 1974). However, it is not enough to show that all the elements exist in the prior art since a claimed invention composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art. *KSR International Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1741 (2007). It is important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does. *Id.* Specifically, there must be some articulated reasoning with a rational underpinning to support a conclusion of obviousness; a conclusory statement will not suffice. *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006). Indeed, the factual inquiry determining whether to combine references

must be thorough and searching, and it must be based on *objective evidence of record*. *In re Lee*, 61 U.S.P.Q.2d 1430, 1436 (Fed. Cir. 2002). Moreover, if the proposed modification or combination or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. *In re Ratti*, 270 F.2d 810, 123 U.S.P.Q. 349 (CCPA 1959); *see* M.P.E.P. §2143.01(IV).

***Independent Claims 11, 18, 23, and 26***

Independent claims 11, 18, 23, and 26 recite, *inter alia*, “blend[ing] data derived from the input image data with the processed image data via weighting factors determined based upon the likelihood that the discrete picture elements exhibit spike noise.” Applicant respectfully asserts that the Kasahara and Cooper references collectively fail to disclose each element of independent claims 11, 18, 23, and 26.

Applicant asserts that the Kasahara reference fails to teach or suggest blending data derived from the input image data with the processed image data based on the likelihood of spike noise, as recited by independent claims 1, 21, and 24. Per the claim language, the processed image data is produced by “processing input image data.” Therefore, as noted above, the claims recite the blending of data derived from the input image data with processed data produced from the input image data. In short, the data that is blended is derived from / produced from the same input image data.

In contrast, the Kasahara reference appears to disclose diffusion processing to modify original image data to reduce pseudo-contour noise for an image area where pseudo-contour noise is expected. Kasahara, paras. 156 and 200. Specifically, a display alternately displays a luminance that is higher by a predetermined value (a diffusion factor) or lower by a predetermined value (a diffusion factor) to temporally equalize the luminance. *Id.* at paras. 189-191; *see also* para. 192 (defining the added or subtracted

value as a diffusion factor). Indeed, the luminance is altered by adding and subtracting the diffusion factors from the original image. *Id.* at para. 194.

In summary, the diffusion factors are used to modify the original image. However, nothing in the Kasahara reference appears to disclose blending data derived from the input image data with processed image data, as recited by independent claims 11, 18, 23, and 26. Further, the Cooper reference fails to obviate this deficiency. Indeed, the Examiner merely cited the Cooper reference for disclosing weighting factors. Therefore, absent some showing that the cited references teach the recited subject matter of claims 11, 18, 23, and 26 (i.e., blending data derived from input image data with processed input image data produced from the input image data) no *prima facie* case of obviousness is believed to exist with regard to claims 11, 18, 23, and 26.

***Dependent Claims 2, 3, 5, 7, 12, 13, 15-20,***

Applicants note that all of the dependent claims rejected under 35 U.S.C. § 103 are each dependent (directly or indirectly) on independent claims 1, 11, 18, 23, or 26. Thus, each of the dependent claims rejected under 35 U.S.C. § 103 depend from a claim rejected under 35 U.S.C. § 102, based on the Wilensky reference or from a claim rejected under 35 U.S.C. § 103, based on the Kasahara reference and the Cooper reference. As discussed above, the Wilensky reference fails to disclose every element of independent claim 1. Moreover, as discussed above, the Kasahara, and Cooper references fail to collectively disclose every element of independent claims 11, 18, 23, and 26. Further, the Avinash, Metcalfe, and Janko references do not appear to obviate the deficiencies of the Wilensky, Kasahara, and Cooper references. For at least these reasons, Applicants respectfully request reconsideration and withdrawal of the rejections as to the instant claims.

***Authorization for Extensions of Time and Payment of Fees***

In accordance with 37 C.F.R. §1.136, Applicant hereby provides a general authorization to treat this and any future reply requiring an extension of time as incorporating a request thereof. The Commissioner is authorized to charge any such extension fee, and any other fees determined to be due, to Deposit Account No. 07-0845; Order No. 135059-1 (GEMS:0240/YOD).

**Conclusion**

In view of the remarks set forth above, Applicant respectfully requests allowance of the pending claims. If the Examiner believes that a telephonic interview will help speed this application toward issuance, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,

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/John Rariden/  
John M. Rariden  
Reg. No. 54,388  
FLETCHER YODER  
P.O. Box 692289  
Houston, TX 77269-2289  
(281) 970-4545